

IN THE SPECIFICATION:

Please amend the paragraph beginning on page 12, line 20 as follows:

Fig. 2 is a result of analyzing DNA sequences in which three CpG motifs are present on 20 base pairs among the DNA sequences present in the chromosomal DNA of M. bovis BCG. In the CpG motifs, the oligonucleotides have 4 and 5 base gaps between the bases C and C (-CGXXCGXXXCG-, MB-ODN 4/5; SEQ ID NO:16), and have each of 5 base gaps between the bases C and C (-CGXXXCGXXXCG-, MB-ODN 5/5; SEQ ID NO:45). It is shown that 395 oligonucleotides in the form of -CGXXCGXXXCG- (SEQ ID NO:16) and 354 oligonucleotides in the form of -CGXXXCGXXXCG- (SEQ ID NO:45) are present in the chromosomal DNA of M. bovis BCG.

Please amend the paragraph beginning on page 13, line 17 as follows:

Fig. 5 is a diagram showing a result of selecting 17 oligonucleotides having five different DNA sequences toward each of 5' end and 3' end of the core CGTTCGTGTCG (SEQ ID NO:186) of MB-ODN 4/5#31 present on 20 base pairs among the DNA sequences present in the chromosomal DNA of M. bovis BCG (Fig. 5a), and then synthesizing the oligonucleotides with the phosphodiester backbones to compare how much the 17 oligonucleotides activate an IL-8 promoter of the macrophage (Fig. 5b).

Please amend the paragraph beginning on page 18, line 9 as follows:

For example: GACGTTGAGTCGTTAACGAG (SEQ ID NO:187)

Please amend the paragraph beginning on page 18, line 10 as follows:

The results of analyzing the oligonucleotides having 4 and 5 base gaps between C and C (-CGXXCGXXXCG-, MB-ODN 4/5, Fig. 2a; SEQ ID NO:16), and the oligonucleotides having each of 5 base gaps between C and C (-CGXXXCGXXXCG-, MB-ODN 5/5, Fig. 2b; SEQ ID NO:45) is listed, as shown in Fig. 2. It was shown that 395 oligonucleotides in the form of -CGXXCGXXXCG- (SEQ ID NO:16) and 354 oligonucleotides in the form of -CGXXXCGXXXCG- (SEQ ID NO:45) are present in the chromosomal DNA of M. bovis BCG. 20 base pairs of the oligonucleotides were listed on the order of priority by giving high marks to the oligonucleotides including the high frequencies of the motif XXCGXX, as shown in Fig. 1. The oligonucleotides whose CG is present in the 5'- or 3'- terminal end of 20 base pairs of the oligonucleotides was excluded, and then the 71 candidate oligonucleotides for controlling the immune reaction were selected, synthesized and used for detecting the candidate substances.

Please amend the paragraph beginning on page 21, line 6 as follows:

20 base pairs of oligonucleotides, present in the chromosomal DNA of M. bovis BCG and homologous to the MB-ODN4/5#31, were analyzed, the homologous oligonucleotides having different DNA sequences except that they have the sequence CGTTCGTGTCG (SEQ ID NO:186) within the DNA sequences of MB-ODN4/5#31 having the effect of the IL-8 promoter activation, as shown in the Example <2-1>. As a result, it was seen that 17 oligonucleotides homologous to the MB-ODN4/5#31 are present, as shown in Fig. 5a. And then, the same method as in the Example <2-1> was repeated to measure the IL-8 promoter activity.

Please amend the paragraph beginning on page 22, line 18 as follows:

The luciferase assay was used for measuring how much the synthetic oligonucleotides having any modified DNA sequences activates the IL-8 promoter of the macrophage. As a result, the IL-8 promoter was highly activated by the oligonucleotides 5'-AGCAGCGTTCGTGTGCGCCT-3' (SEQ ID NO:169), 5'-AGCAGCGTTCATGTCCGCCT-3' (SEQ ID NO:177) 5'-AGCAGCGTTCGTGTCCGCCT-3' (SEQ ID NO:182) (Fig. 6b). Other

synthetic oligonucleotides showed lower IL-8 promoter activities than the control group. In the oligonucleotides that activate the IL-8 promoter, the IL-8 promoter activities were measured even by the oligonucleotide having the second CpG motif TTCGTG variant “TTCATG”, which is not the CpG motif. It was revealed that when the third CpG motif “GTCGGC” was modified, the sequences GTGCGC and GTCCGC reappearing in the CpG motif could activate the IL-8 promoter (Fig. 6).